

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: INVUE

Report Number: P367505

Luminaire Tested: **MSA-SA2C-830-U-SL2-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367505  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2C-830-U-SL2-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8034 lumens  
Efficiency: N/A  
Efficacy: 71.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G2

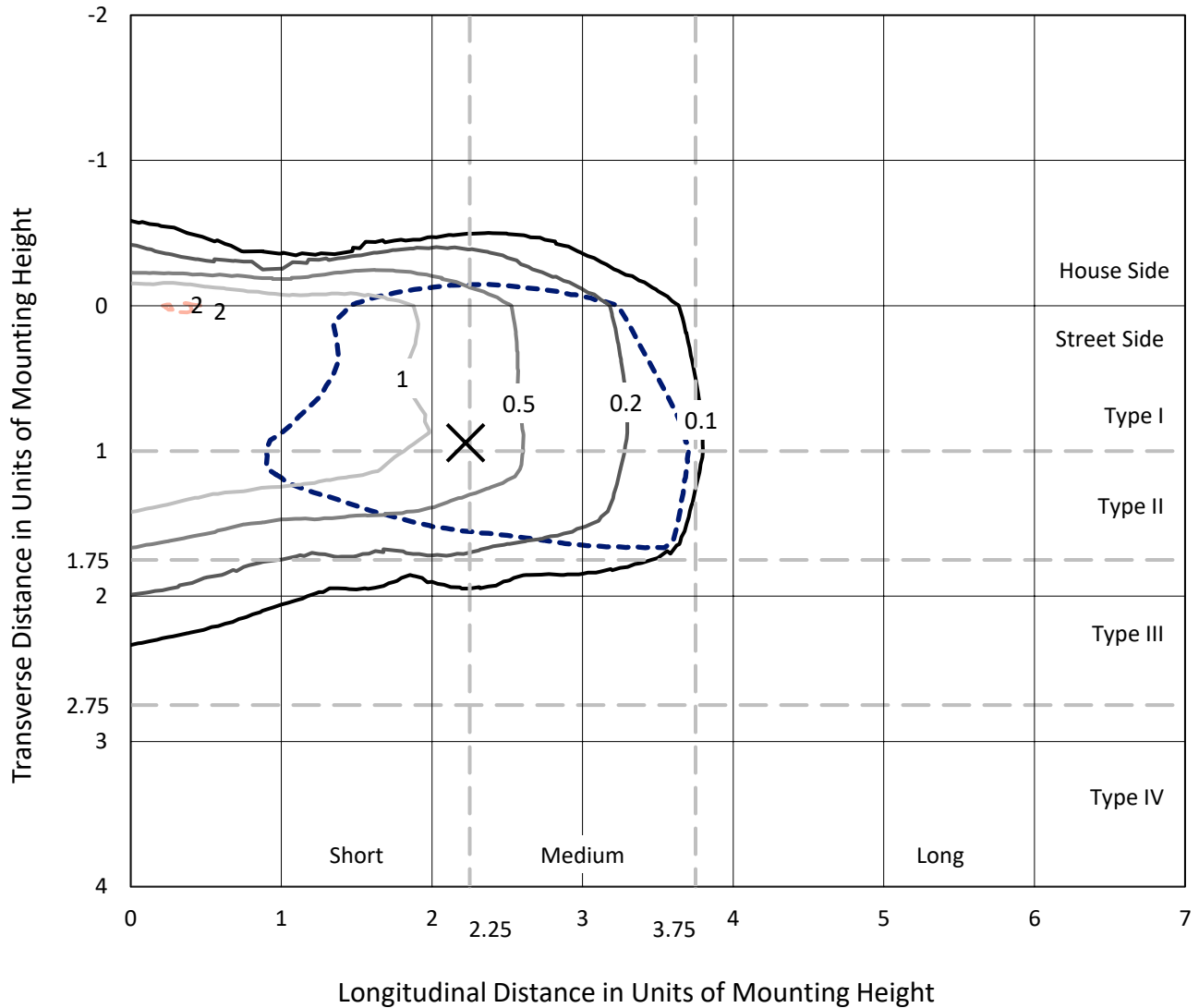
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

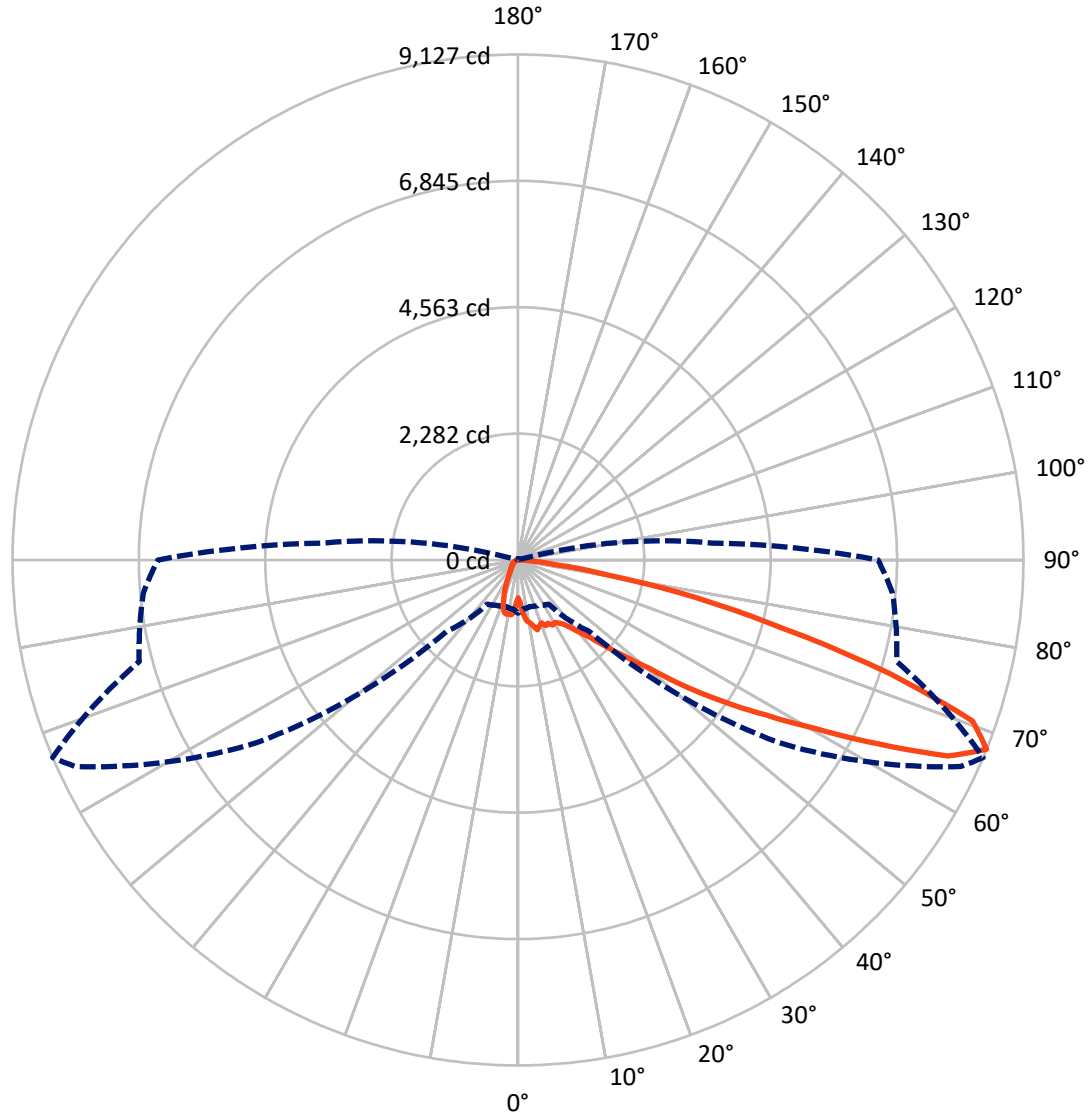
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.1 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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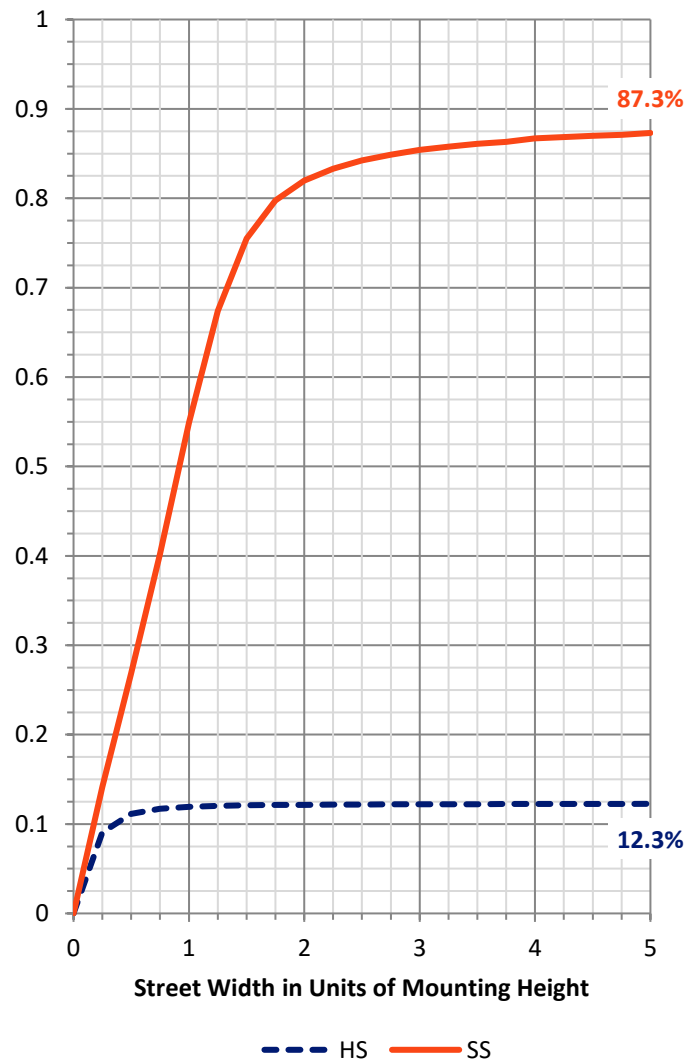
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	993.6	0.0	993.6
	% Fixture	12.4	0.0	12.4
<b>Street Side</b>	Lumens	7040.4	0.0	7040.4
	% Fixture	87.6	0.0	87.6
<b>Total</b>	Lumens	8034.0	0.0	8034.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.9	1.1
10°-20°	254.1	3.2
20°-30°	398.3	5.0
30°-40°	642.2	8.0
40°-50°	1180.1	14.7
50°-60°	1993.0	24.8
60°-70°	2203.3	27.4
70°-80°	1153.2	14.4
80°-90°	123.8	1.5
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	8034.0	100.0
0°-180°	8034.0	100.0

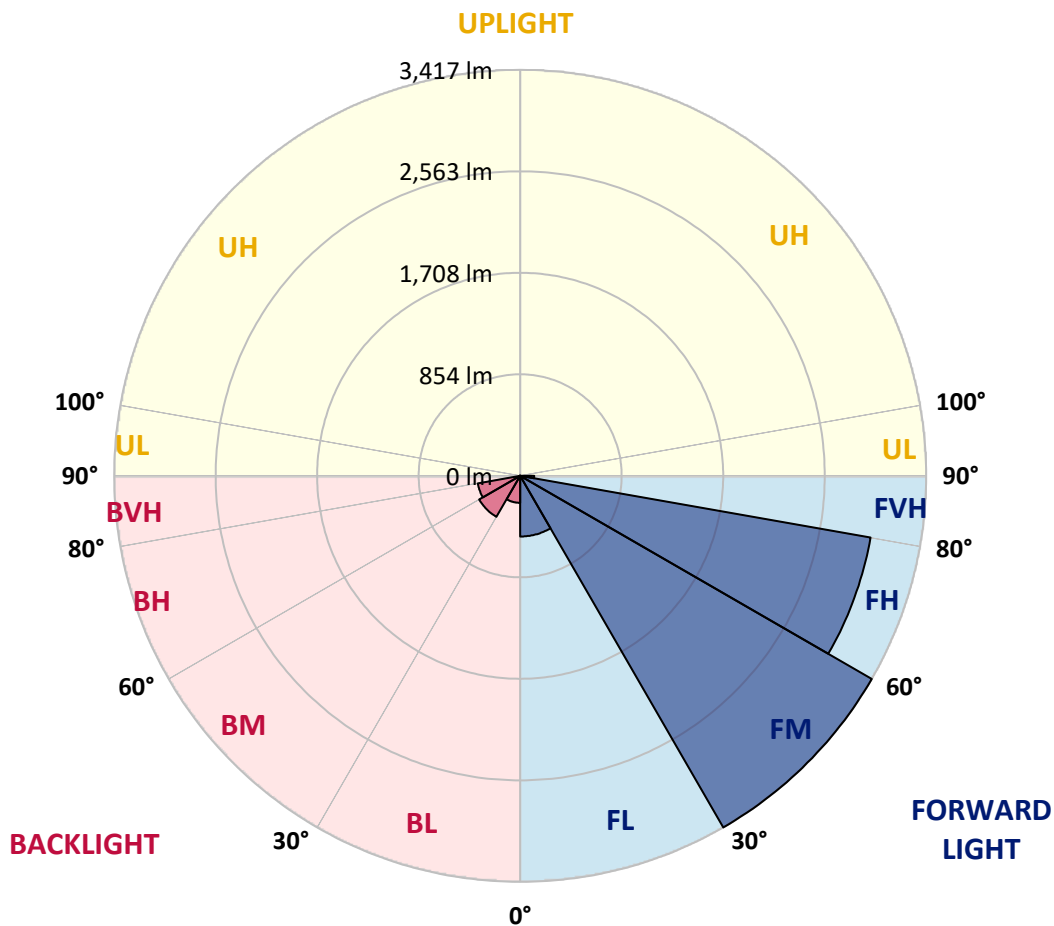


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	510.8	6.4			
FM (30°-60°)	3416.9	42.5			
FH (60°-80°)	2994.1	37.3			G2/5000
FVH (80°-90°)	118.6	1.5			G2/225
BL (0°-30°)	227.5	2.8	B1/500		
BM (30°-60°)	398.4	5.0	B1/1000		
BH (60°-80°)	362.4	4.5	B1/500		G1/500
BVH (80°-90°)	5.3	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**  
 Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	684.3	684.3	684.3	684.3	684.3	684.3	684.3	684.3	684.3	684.3	684.3
2.5°	807.8	780.5	734.0	747.4	774.3	796.8	786.2	765.4	765.8	744.6	820.8
5°	939.8	903.1	876.2	885.6	884.4	883.6	933.7	952.8	961.0	996.0	1047.8
7.5°	977.7	964.7	936.5	945.1	917.0	919.0	1007.0	1090.2	1103.2	1124.8	1216.9
10°	963.0	937.8	948.0	948.0	948.4	994.0	1053.1	1132.6	1148.5	1231.6	1241.4
12.5°	947.1	948.4	988.7	981.4	1036.8	1118.7	1138.7	1227.9	1220.2	1292.3	1399.5
15°	1006.2	1037.2	1011.1	1021.3	1026.6	1122.8	1155.0	1273.6	1307.8	1399.1	1468.8
17.5°	1107.7	1111.8	1057.6	1042.9	1081.2	1108.5	1173.3	1230.4	1253.2	1492.8	1591.5
20°	1126.1	1152.1	1097.1	1012.3	1093.4	1130.9	1176.2	1203.5	1213.3	1521.8	1660.8
22.5°	1236.5	1207.6	1119.5	1055.1	1078.4	1119.1	1147.2	1229.6	1288.3	1467.2	1727.2
25°	1293.1	1285.4	1201.4	1146.4	1122.8	1119.5	1183.9	1246.3	1265.0	1523.8	1743.5
27.5°	1428.9	1411.3	1248.7	1241.8	1164.0	1095.5	1185.1	1297.2	1332.3	1470.4	1804.6
30°	1613.5	1607.0	1390.6	1386.1	1262.2	1139.1	1251.2	1328.6	1307.4	1497.7	1845.4
32.5°	1799.3	1852.3	1631.0	1504.7	1411.7	1299.3	1232.4	1318.8	1356.7	1564.2	1920.4
35°	2023.9	2062.2	1836.8	1745.1	1538.5	1374.2	1356.7	1412.2	1428.5	1643.2	2005.5
37.5°	2416.8	2358.9	2166.9	2010.8	1902.4	1642.0	1555.6	1511.6	1549.5	1750.4	2179.6
40°	2706.9	2670.2	2433.9	2340.5	2091.1	1938.7	1712.9	1671.8	1714.1	1860.5	2300.6
42.5°	3057.0	2980.8	2758.3	2695.1	2438.4	2144.5	1915.5	1929.7	1903.2	2077.7	2512.9
45°	3373.7	3201.7	3077.8	3092.1	2955.1	2558.2	2253.3	2246.4	2224.4	2392.3	2736.3
47.5°	3586.8	3436.4	3315.8	3276.3	3260.0	3285.6	2741.6	2618.5	2602.2	2722.8	3088.0
50°	3701.3	3536.7	3387.5	3395.7	3726.6	3975.6	3245.3	3070.5	3076.6	3202.5	3568.9
52.5°	3624.3	3438.1	3280.8	3433.6	4088.5	4435.7	4079.1	3661.0	3802.8	3770.6	4214.0
55°	3268.5	3106.7	2995.1	3268.5	4128.0	4930.9	5105.7	4549.9	4518.1	4444.7	4871.8
57.5°	2669.8	2530.5	2461.6	2750.1	3695.6	5329.9	6136.8	5554.5	5283.4	4976.1	5417.9
60°	1989.2	1886.5	1814.8	1967.2	2911.9	4942.3	6812.1	6501.2	6187.4	5488.4	5908.6
62.5°	1473.3	1389.7	1313.5	1327.4	2005.1	4250.7	7071.3	7504.2	7324.0	6029.3	6371.6
65°	1175.8	1099.6	1046.2	1015.6	1241.8	3198.0	6710.7	8326.2	8534.0	6538.7	6705.8
67.5°	960.2	895.8	869.3	904.3	974.0	1823.0	5747.2	8825.0	9126.6	7079.1	6788.1
70°	781.3	728.3	725.4	820.0	897.0	1111.4	4227.5	8480.6	8707.6	7171.2	6294.6
72.5°	544.5	521.3	558.3	692.4	888.9	925.5	2427.8	7018.0	7026.1	6333.7	5177.5
75°	308.1	304.4	363.1	552.2	865.6	916.2	1353.5	4959.4	4963.1	4790.3	3586.8
77.5°	169.5	158.5	211.5	373.3	743.4	895.0	873.0	3386.3	3299.5	2665.8	1638.3
80°	78.2	73.8	114.5	239.2	543.7	846.5	699.8	1861.3	1678.3	868.5	399.8
82.5°	32.2	30.6	52.6	153.6	343.6	681.8	589.7	825.7	662.7	165.1	123.5
85°	5.7	6.1	21.6	92.9	192.4	314.2	478.1	392.1	288.1	45.6	67.7
87.5°	0.0	0.0	4.5	22.4	46.5	86.0	194.0	109.6	75.4	13.4	20.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	684.3	684.3	684.3	684.3	684.3	684.3	684.3	684.3	684.3	684.3	684.3
2.5°	835.9	829.0	758.9	762.1	767.0	762.5	761.7	742.1	724.2	783.3	782.5
5°	1057.2	1007.9	959.4	940.6	900.3	847.3	847.7	831.0	813.9	837.9	837.9
7.5°	1214.9	1146.8	1085.3	975.7	868.9	772.3	763.7	740.9	714.8	746.2	752.3
10°	1251.6	1192.5	1113.0	952.0	851.0	756.8	653.3	568.1	528.6	510.2	507.0
12.5°	1364.5	1320.5	1142.8	964.7	819.2	659.8	490.3	389.2	320.3	315.0	307.7
15°	1439.9	1408.9	1172.1	933.3	684.7	474.4	308.1	236.4	208.7	206.2	202.6
17.5°	1556.8	1503.0	1144.0	833.4	535.5	313.0	207.0	186.7	189.9	197.3	191.5
20°	1604.5	1499.4	1082.9	688.8	376.2	209.9	179.7	168.7	177.3	184.2	181.0
22.5°	1653.4	1510.0	1028.6	567.7	245.8	173.6	160.2	154.5	155.3	162.2	162.6
25°	1653.0	1539.3	965.9	442.2	183.0	154.5	144.7	137.3	134.5	139.4	138.2
27.5°	1733.3	1505.5	851.4	328.1	161.0	138.2	128.8	119.8	109.6	114.5	114.5
30°	1733.7	1560.5	771.5	235.6	147.5	123.1	114.9	101.1	89.3	93.3	93.7
32.5°	1779.8	1512.8	697.7	180.1	136.9	114.1	96.2	83.5	76.6	79.1	79.1
35°	1832.3	1553.6	584.4	158.9	126.3	101.5	82.3	72.1	66.8	68.9	68.9
37.5°	2005.9	1545.0	505.8	147.9	119.4	91.7	75.0	63.6	61.1	62.4	64.0
40°	2068.7	1605.7	399.0	141.4	108.0	82.7	66.0	57.5	54.2	55.0	55.4
42.5°	2228.5	1619.2	318.7	136.1	97.8	71.7	58.7	52.6	48.5	48.5	49.7
45°	2404.9	1653.0	253.5	131.6	89.3	64.4	53.0	48.1	42.0	41.2	42.8
47.5°	2660.5	1782.6	206.6	122.7	79.1	59.9	48.9	41.6	36.7	35.0	36.7
50°	3088.0	2002.7	182.6	111.7	71.7	56.2	43.2	35.5	31.8	29.8	31.0
52.5°	3691.2	2382.9	169.9	101.5	65.2	50.5	38.7	31.0	27.3	25.7	26.5
55°	4361.2	2819.0	163.8	91.3	59.5	44.4	33.8	27.3	24.0	22.0	22.4
57.5°	4980.6	3229.0	157.7	81.5	53.8	39.5	29.8	24.0	20.8	18.7	19.2
60°	5591.1	3556.3	143.0	70.1	48.5	35.5	26.1	20.8	18.7	16.3	16.3
62.5°	6131.1	3751.9	121.9	60.7	43.6	31.4	23.2	18.7	17.1	14.7	14.7
65°	6498.7	3760.8	98.2	52.2	38.3	26.9	20.4	17.5	15.9	13.0	12.6
67.5°	6504.0	3516.3	78.7	46.5	33.8	23.6	18.3	16.7	14.7	12.2	11.4
70°	5821.4	2905.0	65.6	40.8	29.3	20.8	15.9	15.9	14.3	11.8	10.6
72.5°	4656.6	2219.9	55.0	35.5	26.1	17.9	14.7	15.1	13.9	11.8	10.6
75°	3130.0	1273.2	45.6	30.2	22.8	15.1	14.3	14.7	14.3	11.8	10.2
77.5°	1441.5	405.5	35.5	24.9	19.6	12.6	13.9	13.9	13.0	10.6	9.0
80°	324.8	99.8	25.7	18.3	15.9	9.4	12.6	11.4	10.2	7.3	5.3
82.5°	118.2	30.6	15.5	11.4	9.8	3.7	8.2	8.2	7.3	5.3	3.3
85°	67.7	15.9	8.6	7.3	5.3	1.6	4.5	4.9	4.1	3.7	1.6
87.5°	22.0	3.7	4.1	4.5	4.1	0.8	1.6	1.6	1.2	0.8	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)